

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

YUDIN, A. et al.

Serial No.:

10,031,449

Int. Filing Date:

July 21, 2000 ASYMMETRIC LIGANDS HAVING USE AS CATALYSTS

Title: Art Unit:

1614

Examiner:

Atty's Docket No.:

61905/2

The Commissioner of Patents and Trademarks U.S. Patent and Trademark Office 2011 South Clark Place Customer Window, Mail Stop Crystal Plaza Two, Lobby, Room 1B03 Arlington, VA 22202

Dear Sir:

We enclose the following:

- 1. Information Disclosure Statement, letter of explanation.
- 2. Substitute form 1449A/PTO listing no U.S. Patent Documents and no Foreign Patent Documents.
- 3. Substitute form 1449A/PTO listing Other Documents (1 page, in duplicate), and copies of listed references.

It is not believed that any fee is required to accompany the submission of the Information Disclosure Statement and enclosed references. However, in the event that a fee is required, the Commissioner is requested to charge any such fee for the papers being filed with this letter, or credit any overpayment, to Account No. 02-2553.

Should any Patent Office Official want to telephone, the call should be made to Brian W. Gray (Registration No. 30,017) at (416) 863-3256.

Yours very truly,

August 13, 2003

Date

Brian W. Gray

Registration No. 30,017

BLAKE, CASSELS & GRAYDON LLP Box 25, Commerce Court West Toronto, Ontario M5L 1A9

M5L 1A9 Canada





### I THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:

YUDIN, A. et al.

Assignee:

Ylektra Inc..

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#### INFORMATION DISCLOSURE STATEMENT

#### Dear Sir:

In accordance with 37 C.F.R. 1.56, the applicant wishes to call the attention of the Examiner to the references contained in an Information Disclosure Statement by Applicant (Substitute for form 1449A/PTO), enclosed herewith. Copies of the references are enclosed in accordance with 37 CFR 1.98.

References 1, 4, 5 and 6 were cited in the International Search Report during the international phase of prosecution of this application.

References 2 and 3 were cited in the International Preliminary Examination Report for this application.

The remaining references are taken from the undersigned's files.

Should any Patent Office Official want to telephone, the call should be made to Brian Gray (Registration No. 30,017) at (416) 863-3256.

Yours very truly,

Brian W. Gray

Registration Ne. 30,017

August 13, 2003

Date

BLAKE, CASSELS & GRAYDON LLP Box 25, Commerce Court West

Toronto, Ontario

M5L 1A9

Canada

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

of 2 Sheet

Complete if Known				
Application Number	10/031,449			
Filing Date	July 21, 2000			
First named Inventor	YUDIN, A.			
Group Art Unit	1614			
Examiner Name				
Attorney Docket Number	61905/2			

U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No.1	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant	
		Number	Kind Code <sup>2</sup> (if known)	of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear	
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

PATENT B THE

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Complete if Known				
10/031,449				
July 21, 2000				
YUDIN, A.				
1614				
61905/2				

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	Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s) publisher, city and/or country where published
		1.	TERADA, M. et al. "Diastereoselective and Enantioselective Glyoxylate-Ene Reaction Catalyzed by New Class of Binaphthol-Derived Titanium Complex". Tetrahedron Letters: 35, pp. 6693-6696, 1994.
		2. ,	SAKAI, T. et al. "Synthesis of Enantiomerically Pure (1 <i>R</i> , 2 <i>S</i> )- and (1 <i>S</i> , 2 <i>R</i> )- 2-Amino-1,2-bis(pentafluorophenyl) ethanols". Tetrahedron: Asymmetry: 7, pp. 1883-1886, 1996.
		3. 1	Chemical Abstracts: 126 (7806W), pp. 871, The American Chemical Society, 1997.
		4.	REETZ, M. et al. "3,3'-Dinitro-octahydrobinaphthol: A New Chiral Ligand for Metal-Catalyzed Enantioselective Reactions". Tetrahedron Letters: 38, pp. 5273-5276, 1997.
		5.	JAFFRES, P. et al. "Phosphonation of 1,1'-binaphthalene-2,2'-diol (BINOL): synthesis of ( <i>R</i> )- and ( <i>S</i> )-2,2' -dihydroxy-1,1' -binaphthalene-6,6' -diyldiphosphonic acid". J. Chem. Soc., Perkin Trans.: 1, pp. 2083-2089, 1998.
		6	YUDIN, A. et al. "F <sub>8</sub> BINOL, an Electronically Perturbed Version of BINOL with Remarkable Configurational Stability". Organic Letters: 2, pp. 41-44, 2000.
MO 15 C		7.	CHEN, Y. et al. "Regioselective Substitution of Flourine in F <sub>8</sub> BINOL as a Versatile Route to New Ligands with Axial Chirality". Organic Letters: 2, pp. 3433-3436, 2000.
76	3	8	MARTYN, L.J. et al. "Catalytic applications of F <sub>8</sub> BINOL: asymmetric oxidation of sulfides to sulfoxides". Journal of Organometallic Chemistry: 603, pp. 98-104, 2000.
ئي ۽		9. ,	PANDIARAJU, S. et al. "Generation of Highly Enantioselective Catalysts from the Pseudoenatiomeric Assembly of BINOL, F <sub>8</sub> BINOL, and Ti(O <i>i</i> Pr)₄". Journal of American Chemical Society: 123, pp. 3850-3851, 2001.
		10.	PANDIARAJU, S. et al. "Toward New Coordination Environments and Molecular Architectures Using F <sub>8</sub> BINOL, and Electron-Poor Isostere of BINOL" Isr. J. Chem.: 41, pp. 309-312, 2001.

Examiner	Date	
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Signature	Considered	_

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